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**Implementation Plan for Secured Transactions Filing Office
(D.4.1)**

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IMPLEMENTATION PLAN FOR SECURED TRANSACTIONS FILING OFFICE

1. Introduction

A number of separate studies¹ of the situation of businesses in Georgia have all concluded that development and growth are inhibited by access to credit at reasonable rates and for reasonable terms. Further, they conclude that the lack of access to credit is caused by the high risk of lending due to the lack of a legal structure that permits lenders to effectively and reliably take security in movable assets of the debtor. The problems with the existing legal structure include its limited scope, the difficult process for creation of a security interest in movables and the inherent delays and inefficiencies in the law's enforcement process. But the most significant problems have to do with the inability of a potential financier to determine the existence or nonexistence of other interests in the collateral in which the financier proposes to take a security interest, and the uncertainties in securing the financier's priority in the collateral against other non-possessory interests and against insolvency of the debtor or disposition of the collateral. It is the latter problems that are the primary subject of this paper, because they can be resolved by a properly authorized and designed registry (hereinafter referred to as "filing office").

2. Concept of operation

The fundamental legal framework necessary for the functioning of a secured transactions filing office includes: a unified security interest that covers all types of interests in movable property that possibly could have priority over an interest of a financier in collateral; provision for filing of a simple notice of only the essential elements necessary to inform a person of the potential existence of an interest in the collateral; and determination of priority of competing interests in collateral by the date and time of filing of the notice in the filing office. Within that framework, the filing office must provide for:

- speed both for filing of notices and for searching for existing notices;
- accuracy and reliability of entry of information and searching of the database;
- easy access both as to time and place;
- simplicity and user-friendliness of the interface for users;
- low transactional cost for users;
- limitation of required information to that necessary for disclosure of an interest in collateral; and
- rule-based decision-making by the filing office to eliminate the uncertainty of individual discretion.

The most effective mechanism that provides those qualities is an electronic filing office in which users file notices of security interests and search the database via the internet. It is proposed that an electronic filing office be developed to permit regular users to file notices through the filing office website and to pay for the service by charging the fees to accounts. For those users who do not have access to the internet or who do not regularly take security in movables, the filing office would accept notices in paper form at locations dispersed across Georgia, and the filing office staff would enter the

¹ State of Businesses in Georgia, State Department of Statistics, 2001; Potential Lease Market in Georgia, IFC, 2004; Assessment of the Secured Financing System of Georgia, The World Bank, 2002; Background Paper on the Constraints Hampering the Small- and Medium-Sized Enterprise (SME) Credit Market in the Regions of Georgia, The Eurasia Foundation, 2003.

information into the database. Any person would have free access to search the database for notices of security interests through the filing office website.

3. State of the reform process

Initial steps in the reform of the legal structure for secured transactions were taken in May and early June 2004. Those steps began with an examination of the existing legal structure and evaluation of the extent of reforms necessary to develop an effective modern secured transactions regime, to include a system for providing notice of security interests and securing priority of security interests.

While there exists in Georgian law a provision for pledge of movable property to secure an obligation,² and there is a law on the registration of interests in movables,³ they do not provide the legal foundation on which to build an effective filing office for notices of security interests in movables, as described in section 1, above. A filing office built in a legal vacuum is meaningless, so it is necessary to develop a comprehensive legal framework for secured transactions that includes authority for a modern electronic filing office. While the scope of work of this project addresses law reform directly related to the registry or filing office, it is necessary to address the law comprehensively in order to make the reform useful and meaningful in improving the environment for secured lending on movables.

The first step, then, is to develop and secure passage by Parliament of a legal framework for secured transactions. In the interest of time, a model that has been used in other developing civil law countries was used as a base.⁴ A debt of gratitude is owed to Allen Welsh and the IRIS Center at the University of Maryland for permission to use their model. Before the model was introduced into the reform process in Georgia, it was adapted to the Georgian context to the extent possible. The draft as it exists in mid-June 2004 is attached as Appendix 1. An ongoing process of further adaptation of the model to meet the needs and drafting requirements of Georgia was begun and continues, along with the process of developing the structure for the filing office. To mid-June 2004, meetings to discuss and modify the draft have been held with the principal stakeholders, a technical group consisting primarily of bank lawyers, and representatives and experts of the leasing industry. Those discussions have been focused on a briefing paper on the issues, attached as Appendix 2. Consensus has been reached in the technical group and leasing group on the core concepts of the law, but it is recognized that the law must be further adapted to the legislative structure of Georgian law, and that conflicts with the Civil Code must be resolved. One preliminary discussion of the form and structure of the proposed law and its relationship to the Civil Code and the new Public Registry Law was held with Mr. Besarion Zoidze, Deputy Chairman of the Constitutional Court.

4. Preparation of law for introduction and constituency involvement

Moving forward from June 2004, GEGI will continue to meet with the stakeholder, technical and leasing groups to ensure that all have a full understanding of the draft and to resolve remaining substantive issues, most notably the treatment of leases of movables for security under the draft. Once consensus is achieved on the substance of the draft, GEGI and the stakeholders must meet and work with the Ministry of Justice and the leadership of the judiciary to resolve questions of structure and placement of the proposed law. Once those issues are resolved, GEGI will re-draft the law into the required structure and format. Additionally, coordinating amendments must be drafted to resolve

² Articles 254 through 285, Civil Code.

³ Articles 311 through 315, Civil Code.

⁴ The IRIS Model Law on Secured Transactions, Allen Welsh, The Center for Institutional Reform in the Informal Sector, 2004.

conflicts with selected provisions of the Civil Code, Taxation Code, Civil Procedure Code, draft Bankruptcy Law and existing and proposed laws on leasing. The conflicts that have been identified are addressed in Appendix 3, though it is anticipated that others will be identified as work continues.

Once drafting is near completion and the product is ready for the legislative process, the groups who have a stake in the success of the law must be mobilized to support its passage by Parliament. Planning for that process is addressed in the Public Outreach Strategy and Plan at Appendix 4.

5. Selection of option for placement of filing office

The draft law defers the question of the placement and operation of the filing office to the regulatory process of the Ministry of Justice. The recently passed Public Registry Law provides for an office of Public Registry that will be responsible for operation of the Land Registry, the secured transaction filing office and other public records systems. There is not complete agreement among all interest groups as to whether the new Public Registry Law requires the secured transaction filing office to be operated by public employees of the Public Registry or whether the filing office may be operated by a private sector company under a contract with the Ministry. GEGI will work with the Ministry and the stakeholders to determine the best choice for placement of the filing office, and will incorporate the choice into the implementing regulation, of which the initial draft is attached as Appendix 5. The potential organizational locations for the filing office and the considerations for each are as follow:

a. In Public Registry

The major factors favoring placement of the filing office in the Public Registry are that it is the operator of the existing pledge registry for movables and that it has a network of offices around the country that could be used as intake points for notices filed on paper by users who do not have internet access and accounts with the filing office. Further, the World Bank is financing the information technology and communications infrastructure for the field offices of the Public Registry, and that should eliminate existing technology barriers to use of those offices for intake of paper notices. The factor disfavoring the Public Registry is its negative reputation among the financial institutions that will use the secured transactions filing office, though that problem may be mitigated by the change of name from the Department of Land Management to the Public Registry, and technology upgrades being financed by the World Bank.

b. With Credit Information Bureau

The major factors favoring placement of the filing office with the Credit Information Bureau that will be authorized by separate legislation are that it will be a new entity that will need similar technology to that required for the filing office, and that its clients and the major clients of the filing office will be the same entities and will need information from both the Credit Information Bureau and the filing office to support lending decisions. The factors disfavoring the Credit Information Bureau are as follow. First, it has yet to be authorized, so it is uncertain what its management and capabilities will be. Second, it is unlikely to have offices distributed across the country to the extent that the Public Registry will, so other arrangements for intake points may have to be made in order to serve users who file notices on paper in areas outside Tbilisi. Third, the nature of the information maintained by the Credit Information Bureau will be private and confidential, whereas information in the secured transaction filing office must be totally accessible to the public, thereby causing the two functions to operate on totally different bases and rules. Finally, as a private sector operation, the Credit Information Bureau will view the filing office operation as a profit center, so it would have to be closely regulated to restrict revenue to what is necessary to cover costs and a fair profit margin.

6. Planning assumptions (including volume projection)

Decisions to be made as described in the remaining sections of this planning document depend at least in part on the amount of business done by the filing office and the nature of that business. For that reason, assumptions must be made based on what is known now. The new Public Registry Law provides that the filing office must be self-supporting. That is, it must generate enough revenue from filing and certified search request fees to cover its fixed and variable costs and to recoup the initial capital outlay and build a reserve for future capital outlays to upgrade capacity and replace components as necessary. It is necessary, then, to estimate as nearly as possible the volume of notices and search requests that can be anticipated, and to determine from that information the estimates of volume of internet traffic and database size. For the purpose of estimating the volumes of notices and search requests, database size and variable costs of operation, the following assumptions will be used:

- a. In sizing the database, the size and number of continuation, termination and objection notices and client records are so small as to be insignificant. Likewise, the small size and limited number of certified search reports cause them to be insignificant as well. (Only certified search reports will be retained in the database – uncertified search reports will not be retained.)
- b. The average number of debtors and secured parties per initial or amended notice is 1.5, based on experience in North American jurisdictions.
- c. The average initial or amended notice record length will not exceed one kilobyte, based on estimates of average length of each field and the foregoing assumption.
- d. The average number of amendments per initial notice in its lifetime is 0.6, based on experience in North American jurisdictions.
- e. At any point in time, half of all amendments that will ever be filed have been filed; that is, based on the foregoing assumption, the total number of notices will be = 1.3 times number of initial notices in the database.
- f. Each notice will have an associated accounting record with an average record length not over 100 bytes.
- g. Volumes and costs of operation will not be significantly different for different potential operators of the filing office.
- h. There will be in the order of 60 client accounts in the first year of operation, growing to about 250 by the third year.
- i. For the purpose of determining internet volume, all notices, whether filed directly by the secured party or entered at a remote location of the filing office, will be entered via the internet. This assumption may not in fact be true for notices filed on paper with the central office in Tbilisi.
- j. For each notice received, there will be an acknowledgment of filing that contains all of the data that were received; i.e. for every notice filed, there will be an outbound transmission of the same size as the inbound transmission.
- k. A secured party will conduct a search for each notice to ensure its priority before filing a notice; i.e. the number of searches will be approximately equal to the number of notices filed in the filing office.
- l. The average search request will not exceed 600 bytes.
- m. The average search report will include one reported notice, and the average size of a search report will not exceed 1600 bytes.
- n. Based on the foregoing assumptions, internet traffic volume will be assumed to be (4.3 KB/notice) times (1.6 notices per initial notice) times (the number of initial notices).

- o. The volumes of initial notices filed in the first five years of operation are estimated as follows:

Sector or motor vehicle financing	Type of financing	Assumptions and calculations	Notices per year
Commercial agriculture and timber	Equipment and annual operating	347 commercial operations, of which 111 are state-owned. Assume 236 private operations will use annual financing. Assume 65% of commercial operation will need equipment every three years. Assume 200 existing non-commercial farms may become commercial.	560
Fishing	Equipment and annual operating	19 commercial operations. Assume all will use annual financing. Assume each will need equipment every four years.	25
Mining	Equipment	91 operations. Assume each will need equipment every four years	25
Manufacturing	Equipment	2935 operations. Assume 75% will need equipment financing, and each of those will need equipment every three years.	750
Utilities	Equipment	61 private and 111 state-owned utilities. Assume 75% of private will need equipment every four years and state-owned every 10 years.	20
Construction	Equipment	635 operations. Assume 75% will finance equipment an average of once per year.	475
Wholesale and retail	Equipment and inventory	16,100 operations, of which 414 are large or medium. Assume all large and medium will finance inventory every two years, and 50% will finance equipment every four years. Assume 25% of small will finance inventory every two years, and 40% will finance equipment every ten years.	2,800
Hotel and restaurant	Equipment	1148 operations. Assume 65% need equipment financing every four years.	190
Transport and communication	Equipment	700 privately owned operations. Assume 10% are communication businesses and need equipment financing every five years. Assume transport financing is on vehicles and covered in vehicle statistics below.	15
Health care	Equipment	272 private operations. Assume 75% need equipment financing every two years.	100
Financial, education, real estate and municipal, social and personal service sectors	Not significant	Assume movables financing in these sectors is insignificant.	0
Trucks	PMSI ⁵	46,000 in use. Assume 10-year replacement and 80% will be financed.	3,680

⁵ Purchase money security instrument

Buses	PMSI	25,000 in use. Assume 10-year replacement and 60% will be financed.	1,500
Special vehicle	PMSI	2000 in use. Assume 10-year replacement and 20% will be financed.	40
Automobiles	PMSI	260,000 in use. Assume 7-year replacement and 60% will be financed.	22,320
Total			32,500

Note: Numbers of businesses and vehicles are based on State Department of Statistics figures. Rates of financing of business equipment, trucks and busses are based on IFC Survey Analysis of Potential Lease Market in Georgia.

It is anticipated that the general automobile-buying public will not immediately be aware of new financing availability under the new secured transactions act, and will not immediately change buying habits when they do become aware of it. Similarly, small businesses will likely not become aware of the availability of access to reasonably priced capital immediately. For that reason, utilization of the filing office will not likely reach full potential for at least the first year and likely not until the third or fourth year. For that reason, there should be a discount in the projections for the first two years of operation of the order of 50% in the first year and 75% in the second year. Thereafter from year 4, a growth rate of approximately 10% per year should be used, based on experience in other countries. Therefore, the volume and database projections for the first eight years of operation are as follow:

Year	1	2	3	4	5	6	7	8
# of initial notices	16,250	24,400	32,500	35,750	39,300	43,200	47,500	52,200
Database size (MB)	21	53	95	141	191	246	286	320
Internet vol. (MB)	125	188	250	275	302	332	365	400

7. Selection of physical configuration option

Once the content of the law on secured transactions is stable and passage is certain, the Ministry of Justice or the Public Registry will have to determine the physical configuration of the information technology system for the filing office. The limited projected size of the database makes possible four different hardware options that could support the filing office's operations. Those options and their relative merits and disadvantages will be considered by the Ministry or Public Registry. They are as follow:

1. Use ISP server space

Since the size of the database should not exceed half a gigabyte in the foreseeable lifetime of the initial hardware, and because the application software will be quite small, the option of leasing shared space on web and database servers owned by the private sector ISP that provides internet services for the filing office may be viable. The advantages of such an arrangement are that it eliminates the need for an initial capital outlay for hardware and platform, it would not require the filing office facility to incur costs of preparing an adequate facility, it would not require linkage of the ISP to the servers at a remote location, and it would not require the filing office to include a system administrator in its staffing. The disadvantages are that control of the data and its security would be outside the direct control of the filing office, and the ISP's existing platform and the platform on which the application software runs may not be compatible, requiring the ISP to acquire additional hardware and platform. Additionally, such services are not normally provided by any of the Tbilisi ISPs, so it would be departure from their normal mode of operation and would constitute a significant risk factor.

2. House filing office servers with ISP

The filing office could acquire the web and database servers and house them at the ISP, which would manage and maintain them. The advantages of such an arrangement are the same as for leasing space on the ISP servers, except that an initial capital outlay would be required in this case. One additional advantage is that the filing office would have greater flexibility in changing the management of its system, since it would be able to move its servers to another location without having to convert the data to a new hardware configuration. The disadvantages are that capital outlay would be required for the servers, control of the data and its security would be outside the direct control of the filing office, and Tbilisi ISPs do not currently provide such services routinely, so it would be a departure from the norm, with attendant risk.

3. House filing office servers in filing office

The filing office could acquire servers and manage them internally with its own staff. The advantages of such an arrangement are that it gives the filing office full control over security and operation of the servers so that there is no risk of the ISP's failure to perform adequately or of termination of its contract. The disadvantages are the capital outlay required to purchase servers, the need for a system administrator on the filing office staff, the requirement to connect to the ISP from a location remote to it, and the need to separately contract for secure off-site storage of back-ups.

4. Share server space with Land Registry

If the filing office is located in close proximity to the Land Registry, and if the land registry uses the same platform as is used by the filing office, it may be possible for the filing office to share space on the servers used for the Land Registry. The advantages of such an arrangement are that it would eliminate the need for separate capital outlay for servers without incurring costs for operation by an ISP, and that it would permit a system administrator to be shared with the Land Registry. The disadvantages are that the filing office would not have direct control over the servers and would be dependent on the Land Registry for service level.

8. Application software acquisition options

The Ministry of Justice or Public Registry will have two general options for procurement of the application software for operation of a web-based filing office. Those are (1) to purchase an existing application from an off-shore vendor that has developed applications for jurisdictions with similar secured transaction laws, and (2) to contract with a local software development company to build an application based on specifications and guidance of an expert in filing office operations. The principal considerations in deciding whether to design the tender for one option or for both options are development cost and the time from award to delivery of a working application. The options and their relative merits are as follows:

a. Purchase off-the-shelf application software

There are several companies in North America that have developed web-based filing office application software that could be quickly and easily adapted to the Georgian context. One of those provided information on costs and delivery schedule that is used here only as an example of a provider of existing software. An existing software application could be adapted for Georgia, and be operational in one and one half to two months from award of a contract. Most North American filing office web applications generally use a SQL database and run on Microsoft platforms. North American labor rates are significantly higher than in Georgia, but the time required by North American companies would be substantially less because they have existing applications and subject matter expertise. Cost for the application software using this option, including modifications, testing and installation, should not exceed US\$50,000, and could be significantly less. The off-the-shelf applications generally include maintenance of the application software in the price.

b. Develop application software locally

There are a number of potential local developers of web-based software applications such as the filing office application. One of those, Alta Software provided data on costs and development times, and is, therefore, used here as an example. It was selected as the example because it has experience in developing banking applications, and has substantial experience in web application development. Alta has not designed and built software applications such as the filing office requires, though it has built some applications that have some common components such as payment and searching features. Alta usually builds on a Windows platform using similar tools to the North American vendors. The labor rate Alta and other local developers use in pricing contracts is quite low. The disadvantage of building an application from the ground up is that it will take substantially more time to define the requirements and to design, build and test the application, due in part to lack of subject matter knowledge and lack of tested code. A domestic developer would need to work with someone who is knowledgeable on filing office operations during development. Alta estimates that it would take three to four months from award of a contract until the application could be operational. Alta estimates design, development, testing and installation of the application would cost between US\$30,000 and \$35,000. Applications that are built to specification usually price maintenance separately, at least after the first year.

Once the procurement strategy is determined, procurement documents must be prepared and published. Those documents must include sufficient detail to permit the vendor or developer to customize the application software to meet the specific needs of the filing office. Specification documents have been developed based on the substance of the existing draft of the law on secured transactions and assumptions that regular users may file notices electronically and pay fees by charging them to accounts with the filing office. The specification documents include a Process Model Narrative, found at Appendix 6, a Business Rules Matrix, found at Appendix 7 and a screen map, found at Appendix 8. Before the procurement documents are prepared and published, those specifications must be validated against the final version of the law that is adopted, the implementing regulation as adopted by the Ministry of Justice and other policy determined by the Ministry and the Public Registry. If necessary, the specifications will be updated before the tender.

9. Staffing

After the law is passed and implementation is approaching, the filing office will have to be staffed. The filing office will require a small staff because the filing and searching functions will be done by users without staff intervention. Staff will be required only to enroll new client accounts, to accept and post payments to client accounts, to monitor timeliness of payments on accounts, to deposit payments, to enter data for notices filed on paper with the filing office in Tbilisi, to operate a help desk, to maintain the appearance and content of the website, to train users, to publicize the filing office and to administer the information technology system. The filing office will need:

1. A manager to oversee the operation, to provide user training and to publicize the filing office and maintain good relations with the user community;
2. A data entry and help-desk operator to provide client assistance, assist with user training, maintain the user-maintainable variables in the system and maintain the website appearance and content; and
3. A bookkeeper to prepare and mail statements, accept payments on client accounts, monitor and collect on past-due accounts, maintain books of account and statistical reports, and deposit funds.
4. If the servers are housed in the filing office, a system administrator will be required to maintain the system, insure system security, perform back-ups of the system and the data, and develop system recovery plans in the event of catastrophic failure or disaster.

The following table sets out anticipated personnel costs for the first year, both for operation by the Ministry of Justice or other government office and for a private sector operator. The private sector rates are based on prevailing local rates in Tbilisi, whereas the government rates are based on prevailing government rates plus a premium. The premium is possible because the filing office will be designed to operate on its receipts rather than appropriations, and it is necessary because it is imperative to reduce the potential for corruption in the filing office. Fringe costs to employer are assumed to be 10%. Annual costs are rounded to nearest GEL 1,000.

Position	Salary + Fringe (in MOJ)	Salary + Fringe (private operator)
Manager, trainer and client relations	GEL 11,000/year	GEL 16,000/year
System administrator (necessary only if servers are in filing office)	GEL 10,000/year	GEL 13,000/year
Data entry and help desk operator	GEL 5,000/year	GEL 7,000/year
Bookkeeper	GEL 6,000/year	GEL 8,000/year

After placement of the filing, office is determined and as the effective date of the law on secured transactions approaches, hiring of staff for the central office of the filing office will be done in time to train the staff before start-up of filing office operations. The duty descriptions to be used in hiring are included in the draft Operations Manual at Appendix 9.

10. Documentation and Training

There will be three general types of users of the secured transactions office facilities and technology. Those are the staffs that operate the office, regular users of the filing office such as banks or leasing companies, and occasional users of the filing office. Documents have been developed for each type of user based on the substance of the existing draft of the law on secured transactions and assumptions that regular users may file notices electronically and pay fees by charging them to accounts with the filing office, while occasional users will file notices on paper and pay fees in cash. When the law is passed and the policies of the Ministry of Justice and Public Registry on operation of the filing office are established, these documents will be validated against the law and policies and amended as necessary before operation begins. The final versions of these documents will form the basis for training of each type of user.

- The principal document used by filing office staff will be the Operations Manual, the draft of which is at Appendix 9.
- The guide for regular users of filing office services who have accounts with the filing office will be the User Guide, the draft of which is at Appendix 10. The training program for regular users is addressed in the Public Outreach Strategy and Plan at Appendix 4.
- Occasional users will use forms provided by the filing office on its website and in paper form at the central office and all field offices for intake of notices. The draft forms are at Appendix 11.

11. Audit

To ensure adherence to financial accountability standards and to maintain high performance standards, the filing office will provide for periodic audits of two types. Though no audit will be required prior to implementation of the filing office, the costs of audits need to be considered in planning. The types of audit are as follow:

- A financial audit is provided for in the implementing regulation at Appendix 5. A financial audit addresses revenue accounting and budgeting processes. Such audits should be done by a reputable, independent accounting firm on an annual schedule.

- b. A performance audit addresses the policies, processes and procedures of the filing office. Its purpose is to improve performance, and should be done once every two or three years.

12. Cost analysis

After the content of the final version of the law on secured transactions is known and after decisions on the placement of the filing office, the physical configuration of the information technology system and the acquisition of the application software are made, a projection of the anticipated annual costs and the amortizable capital outlays must be computed. The costs will be used to derive the revenue requirements, which in turn will be used to determine the fee levels to be charged for filing of notices and generation of certified search reports.

The process described in this section may be used to develop the cost structure. The cost figures used in this section are illustrative only, and reflect only general orders of magnitude based on experience in similar situations in other countries. Once decisions are made on placement of the filing office and the hardware configuration, and once cost rates are better known, the rates will be applied to the process illustrated in this section to more reliably determine costs. Only relevant options will need to be considered in the actual computations. It is also important to understand that the costs will change over time, so that the cost structure must be updated over time.

a. Capital outlay amortization and reserve accrual

It is assumed that the amortization period of all capital items is five years, and that payback of initial capital costs is required and accrual of a capital reserve for replacement capital items will be equal to the amortization rate; that is, the annual figure for amortization and reserve will be 2 times amortization. If payback of the initial outlay is not required, only the capital reserve will be necessary, and it will be equal to the amortization amount. Because providers of off-the-shelf applications and local developers generally use Microsoft platforms and databases, order of magnitude estimates for items reflect Microsoft configuration.

1. If servers and system software are purchased and housed in the filing office:

Item	Number	Unit Cost	Cost
Application server (2 for performance and redundancy)	2	\$5,000	\$10,000
Database server (2 for redundancy)	2	\$7,000	\$14,000
Uninterrupted Power Supply (UPS)	1	\$10,000	\$10,000
Physical security and climate control for servers	1	\$6,000	\$6,000
PC, including monitor and software	5	\$1,600	\$8,000
LaserJet printer	1	\$800	\$800
Router	1	\$1,000	\$1,000
Firewall	1	\$5,000	\$5,000
PC for firewall and e-mail server	1	\$1,000	\$1,000
Fax machine	1	\$500	\$500
Telephones	4	\$120	\$480
Telephone switch for 2 lines	1	\$400	\$400
Application server license – Windows 2003 Server	2	\$1,500	\$3,000
Database license - SQL Server 2003	2	\$10,000	\$20,000
Miscellaneous IT (cabling, etc.)			\$1,500
Office desk, with return	4	\$800	\$3,200
Desk chair	3	\$140	\$420
Executive chair	1	\$200	\$200
Public lobby seating and table	1	\$800	\$800
Pre-start-up expenses (salary, travel, materials, etc.)			\$1,500
Total			\$87,800

$$\text{Annual amortization} = \$87,800/5 = \$17,560$$

Annual amortization + capital reserve = $2 \times \$17,560 = \$35,120$

2. If servers and system software are purchased and housed in the ISP, the items for UPS and physical security and climate control will be unnecessary, so the total cost would be \$71,800.

Annual amortization = $\$71,800/5 = \$14,360$

Annual amortization + capital reserve = $2 \times \$14,360 = \$28,720$

3. If ISP or Land Registry shares servers with secured transaction filing office:

Item	Number	Unit Cost	Cost
PC, including monitor and software	4	\$1,600	\$6,400
LaserJet printer	1	\$800	\$800
Router	1	\$1,000	\$1,000
Fax machine	1	\$500	\$500
Telephones	3	\$120	\$360
Telephone switch for 2 lines	1	\$400	\$400
Office desk, with return	4	\$800	\$3,200
Desk chair	3	\$140	\$420
Executive chair	1	\$200	\$200
Public lobby seating and table	1	\$800	\$800
Pre-start-up expenses (salary, travel, materials, etc.)			\$1,500
Total			\$14,500

Annual amortization = $\$14,500/5 = \$2,920$

Annual amortization + capital reserve = $2 \times \$2,920 = \$5,840$

b. Annual costs

1. Maintenance

It is assumed in the following computations that servers are owned by filing office. If servers are not owned, hardware/system software and database maintenance cost = 0.

It is also assumed that application software maintenance for a custom-built application would be priced separately. If it is not, the cost for maintenance of the application software would = 0.

Component	Annual cost
Hardware and operating system	\$3,000
Database	\$7,500
Application software if purchased	\$0 (included in purchase price)
Application software if built	\$8,000

Total annual cost if servers are owned = \$18,500 if application software is built or \$10,500 if application software is purchased

Total annual cost if servers are not owned = \$8,000 if application software is built or \$0 if it is purchased

2. Rent or space cost for filing office

a. If filing office is housed in Public Registry:

It is assumed that the government allocates a space charge for each unit. Rate is hypothetical only.

Condition	Space required	Cost/m ² /yr	Annual Cost
Servers in filing office	100 m ²	\$80	\$8,000
Servers in ISP or Land Registry	70m ²	\$80	\$5,600

- b. If filing office is housed in private sector facility:

Condition	Space required	Cost/m ² /yr	Annual Cost
Servers in filing office	100 m ²	\$150	\$15,000
Servers in ISP	70m ²	\$150	\$10,500

3. Personnel

The personnel configurations and costs from section 9 are assumed.

- a. If filing office operates within Public Registry:

Condition	Annual cost (GEL)	Annual cost (\$)
Servers in filing office	GEL 32,000	\$17,000
Servers in ISP	GEL 22,000	\$12,000

- b. If filing office is operated by a private entity:

Condition	Annual cost (GEL)	Annual cost (\$)
Servers in filing office	GEL 44,000	\$23,000
Servers in ISP	GEL 31,000	\$16,000

4. ISP

- a. If ISP provides space on its servers and back-up:

Average database size from assumptions in section 6 above is assumed as representative of cost over the 5-year period that will be used to compute revenue requirements. Server space and back-up costs will vary substantially over time as database grows; e.g. server space in Year 1 would cost \$630, while in Year 5 it would be \$5730.

Item	Rate	Annual cost
Server space, 2 web, 2 DB	\$2.50/MB/mo	\$3,000
Back-up	\$90/mo	\$1,080
Internet at 64Kbps	\$200/mo	\$2,400

- b. If ISP houses filing office-owned servers, maintenance and back-up:

Item	Rate	Annual cost
Server co-location, 2 web, 2 DB	\$35/server/mo	\$1,680
Back-up	\$90/mo	\$1,080
Internet at 64Kbps	\$200/mo	\$2,400

- c. If ISP provides internet services only, annual cost would be \$2400.

5. Power

Assumed cost per KWH is hypothetical only.

Condition	KWH/yr	Cost/KWH	Annual cost
Servers in filing office	22,000	\$0.12	\$2,640

Servers not in filing office	12,000	\$0.12	\$1,440
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6. Miscellaneous costs

Item	Annual cost
Phone	\$5,000
Travel and materials for continuing user training and project administration	\$1,500
Consumables	\$500
Financial audit	\$1,000
Annual reserve for performance audit	\$500
Total	\$8,500

13. Revenue requirements and fee setting

After the annual amortization, capital reserve and costs are determined, they can be used to determine the revenue that will be required to make the filing office self-sustaining. It is assumed that start-up funding will be sufficient to subsidize the first two years of operation because it is anticipated that utilization will not reach its full potential until the full base of users becomes aware of and begin to use the filing office. Costs will exceed revenues in the first two years, but later years should generate excess revenues to pay back the losses of the first two years. Therefore, revenue requirements will be determined for the first five years of operation, and the fees will be established to generate revenue to cover costs over that period, rather than for each individual year. Because there will be a substantial amount of uncertainty about the volumes of notices filed, there should be a margin of error built into the revenue to ensure it covers the amortization and costs of the full five-year period, though it will be possible to adjust fees to increase or decrease revenue if the estimates are proven to be substantially outside the margin of error. Though the Ministry of Justice or the Public Registry may use a different margin, the margin used here for illustrative purposes will be 25%.

For the purpose of illustrating the process for determining revenue requirements and fee level, it is assumed that the filing office will be established in the Public Registry, that the initial capital outlay will be repaid, that the filing office will own and house its own servers, and that the application software will be purchased from an off-the-shelf vendor. The annual cost, using those assumptions, is as follows:

Item	Annual amount
Amortization and capital reserve accrual	\$35,120
Maintenance	\$10,500
Office space	\$8,000
Personnel	\$17,000
ISP services	\$2,400
Power	\$2,640
Miscellaneous costs	\$8,500
Total	\$84,160

Over first five years, projected cost = $5 \times \$84,160 = \$420,800$.

With 25% margin, required revenues = $1.25 \times \$420,800 = \$526,000$.

Using the assumptions in section 6 above, the total number of initial notices in Years 1 through 5 will be 148,200. The total number of notices, including change notices will be $1.3 \times 148,200 = 192,660$.

Fees for filing a notice or for requesting a certified search report would be $\$526,000/192,660 = \2.73 .

Fee in GEL = $\$2.73 \times 1.9 \text{ GEL}/\$ = 5.19$, rounded to GEL 5.20.

14. Steps and timeframes

The foregoing sections are not in chronological order, and some sections include more than one discrete operation. While some operations run concurrently, the general sequence of operations required to be completed between mid-June 2004 and full operation of the secured transactions filing office is as laid out in the following table. The timeframes optimistically assume that Parliament acts quickly on the law on secured transactions and that there are no long-term delays at any point in the process. The timeframes are laid out for both off-the-shelf purchase of application software and for building locally.

Operation	If Purchase	If Build
Preparation of legislation, including coordinating amendments	Jun-Sep 04	Jun-Sep 04
Public outreach supporting adoption	Aug-Sep 04	Aug-Sep 04
Legislative process	Sep-Oct 04	Sep-Oct 04
Select placement of filing office	Oct 04	Oct 04
Update assumptions for new information	Oct 04	Oct 04
Select physical configuration of filing office	Oct 04	Oct 04
Determine scope of tender for application software (i.e. purchase, build or both)	Oct 04	Oct 04
Prepare and publish tenders for application software, hardware/software and ISP	Oct-Nov 04	Oct-Nov 04
Select vendors	Nov 04	Nov 04
Determine costs, capital outlays and revenue requirements	Nov 04	Nov 04
Set fees	Nov 04	Nov 04
Promulgate implementing regulation	Nov 04	Nov 04
Application software development and testing	Dec 04-Jan 05	Dec 04-Mar 05
Install hardware and system software	Jan 05	Mar 05
Hire staff	Jan-Feb 05	Mar-Apr 05
Install and debug application software	Feb-Mar 05	Apr-May 05
Revise and publish user documentation (operations manual, user guide and forms)	Feb 05	Apr 05
Train staff	Feb 05	Apr 05
Begin training of external users	Mar 05	May 05
Live operation of filing office	Apr 05	Jun 05